



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,671	03/11/2005	Tetsuo Nakanishi	TAKIT-196	5243

7590 05/03/2010
Millen White Zelano & Branigan
Arlington Courthouse Plaza I
2200 Clarendon Boulevard
Arlington, VA 22201

EXAMINER

KASSA, TIGABU

ART UNIT	PAPER NUMBER
----------	--------------

1619

MAIL DATE	DELIVERY MODE
-----------	---------------

05/03/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/527,671	Applicant(s) NAKANISHI ET AL.	
	Examiner TIGABU KASSA	Art Unit 1619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,7-34,37 and 38 is/are pending in the application.
- 4a) Of the above claim(s) 7-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2 and 37-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/30/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the amendment filed December 18, 2009. **Claims 2, 7-34, and 37-38 are currently pending. Claims 2 and 37-38 are under consideration in the instant office action.** Claims 7-34 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claims. Claims 1, 3-6, and 35-36 are cancelled.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 11/30/09 is noted and the submissions are in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the references.

New Rejections

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically taught or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under

Art Unit: 1619

37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness

Claims 2 and 37-38 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Shioya et al. (US Patent No 5,144,054) in view of Sakuta (WO01/92375) using the equivalent US Patent No. 6747115 for translation and Harai et al. (European Patent Specification 0350951, IDS reference).

Applicant Claims

Instant claim 2 recites an organopolysiloxane polymer having a glycerol derivative which can swell up by containing at least its own weight of liquid oil selected from the list recited in the claim and which has a three dimensional cross-linked structure. Applicant has elected the following species originally for a2 and b1: the organopolysiloxane polymer obtained by the addition polymerization of the organohydrogen polysiloxane (a2) $M_2D_{40}D^H_2$ and as the glycerol derivative (b1) polyglycerol diallylether. The examiner has expanded the search to the species 10-undecenylglyceryl ether, which is described by Shioya et al. (column 23, line 54,

Art Unit: 1619

example 10). Instant claims 37 and 38 recite an organopolysiloxane polymer according to claim 2, wherein the liquid oil is selected from the list recited in the claims respectively

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

Shioya et al. teach novel siloxane derivatives having surface active action useful as an emulsifier capable of excellent emulsification stability and having good fitness, good slip, **good cosmetic adhesiveness**, and good usage feeling (column 2, lines 6-12).

Shioya et al. teach an organopolysiloxane polymer having a glycerol derivative

(column 23, example 10, lines 50-53), which addresses the limitations of the elected species combination, specifically the variables recited in instant claim 2, for (a2) where $1.0 \leq d \leq 2.3$, $0.001 \leq e \leq 1.0$ and R^1 is a substituted or unsubstituted monovalent hydrocarbon group having 1-30 carbon atoms, furthermore, for (b1) where f is an integer from 2-10 and R^3 is an alkenyl group having 2-20 carbon atoms have been addressed by the teachings of Shioya et al.

Ascertainment of the Difference Between Scope the Prior Art and the Claims (MPEP §2141.012)

Shioya et al. do not teach the polymer as having a three dimensional cross-linked structure and the types of liquid oils. These deficiencies are cured by the teachings of Sakuta.

Sakuta teaches a silicone polymer that is insoluble in organic solvents due to its **three dimensional cross-linked structure** which swells up relative to fluorsilicone oils (abstract). The polymer includes **an organohydrogen polysiloxane of formula a2 which is the same as the instantly selected species a2** (column 2, line 30). Sakuta also teaches his invention also relates to a paste-like composition formed by making **the silicone**

Art Unit: 1619

compounds swell up in silicone oil and a cosmetic material (see abstract). The examiner notes that the claim recitation excludes fluorinated silicones. However, Sakuta also clearly teaches that the silicone compounds also swell up in other silicone oils (see abstract). As a matter of fact Sakuta teaches that the oil b) which is a component of this invention may be of natural animal or vegetable oils and fats, and semi-synthetic oils and fats are avocado oil, linseed oil, almond oil, Chinese wax, perilla oil, olive oil etc., (column 8, lines 44-67). **As examples of silicone oils, mention may be made of organopolysiloxanes of low to high viscosity such as dimethylpolysiloxane, methylphenyl-polysiloxane, methylhydrogenpolysiloxane and dimethylsiloxane-methylphenylsiloxane copolymer, cyclic siloxanes** such as octamethylcyclotetrasiloxane etc., (column 9, lines 45-61). **Examples of hydrocarbon oils include ozokerite, squalane, squalene, ceresine, paraffin, paraffin wax, liquid paraffin, pristane, polyisobutylene, microcrystalline wax and Vaseline** (column 9, lines 1-4).

Shioya et al. also lack the teaching of glycerol derivative polyglycerol diallylether. This deficiency is cured by the teachings of Harai et al.

Harai et al. teach **a silicone rubber adhesive comprising a silicone rubber composition comprising an organohydrogen polysiloxane component** (page 3, line 6) **and a partial allyl ether of a multivalent of alcohol component which functions to impart tack (adhesiveness) to the uncured adhesive, and with other components of the composition to improve the durability of adhesion for various substrates** (page 4, lines 6-9). Harai et al. teach an example of polyglycerol diallylether **diglycerol diallyl ether** (page 4, line 13).

***Finding of Prima Facie Obviousness Rationale and Motivation
(MPEP §2142-2143)***

It would have been *prima facie* obvious to the ordinarily skilled artisan to crosslink the organopolysiloxane of Shioya et al. because Sakuta teach the cross-linking of silicone polymers (abstract). The skilled artisan would have been motivated to crosslink the polymer **so as to achieve excellent water and oil repellence wherein the polymer swells relative to the oils** (Sakuta, column 2, lines 10-14 and lines 5-7) and thereby achieve a more stable, functional cosmetic composition. The skilled artisan would have a reasonable expectation of success because cross-linking polymers, including polyorganosiloxanes, are well known in the art as evidenced by Sakuta. Moreover, the polymers taught by Sakuta and Shioya et al. are similar polymers which both contain the instantly selected species a2.

It would have been *prima facie* obvious to the ordinarily skilled artisan to crosslink the organopolysiloxane of Shioya et al. because Sakuta teach the cross-linking of silicone polymers. The skilled artisan would have been motivated to crosslink the polymer so as to achieve excellent water and oil repellence wherein the polymer swells relative to the oils and thereby achieve a more stable, functional cosmetic composition. The skilled artisan would have a reasonable expectation of success because cross-linking polymers, including polyorganosiloxanes, are well known in the art as evidenced by Sakuta. Moreover, the polymers taught by Sakuta and Shioya et al. are similar polymers which both contain the instantly selected species a2.

Art Unit: 1619

It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Shioya et al. and Harai et al., because Harai et al. teach that in a composition comprising organohydrogen polysiloxane component (page 3, line 6) the incorporation of a partial allyl ether such as **diglycerol diallyl ether** (page 4, line 13) of a multivalent of alcohol component functions impart tack (adhesiveness) to the uncured adhesive and with other components of the composition improves the durability of adhesion for various substrates (page 4, lines 6-9). The skilled artisan would be motivated to combine the teachings, because imparting tack (adhesiveness) to the organohydrogen polysiloxane allows these polymers to be useful emulsifiers with excellent emulsification stability with good cosmetic adhesiveness. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Shioya et al. and Harai et al., because it is desirable to utilize for example **diglycerol diallyl ether** which has two available double bonds for polymerization, since one of the double bond can cross-link to the organohydrogen siloxane polymer and the other one would be available for further cross-linking and polymerization. A skilled artisan would have had a reasonable expectation of success upon combination of the prior art teachings, because both of the teachings comprise a similar organohydrogen siloxane polymer and glycerol derivative components. Furthermore, both teachings strive for a better organohydrogen siloxane polymer with excellent adhesiveness for various purposes.

In light of the forgoing discussion, one of ordinary skill in the art would have concluded that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a).

Therefore, the invention would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Response to arguments

Applicant's arguments filed 12/18/09 have been fully considered but they are not persuasive. *Applicant argues that Shioya et al do not teach the organopolysiloxane polymer in three-dimensional cross-linked form. Additionally, applicant argued that from the glyceryl group taught by Shioya et al. only one terminal is combined with a Si atom of the polysiloxane by means of the bivalent hydrocarbon group resulting in the glycerol compound having an unsaturated bond at only one molecular end should be used in order to synthesize the component.* This is not persuasive because applicant has resorted to attacking the references individually while the rejection is in combination of Shioya et al. and Sakuta. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The examiner has clearly stated in the previous office action that the missing element from the teachings of Shioya et al. is, Shioya et al. do not teach the polymer as having a three dimensional cross-linked structure. However, this deficiency is cured by the teachings of Sakuta.

With regard to Sakuta applicants argued that a cross-linking type organopolysiloxane described in Sakuta is a polyether-modified organopolysiloxane,

Art Unit: 1619

which is different from the cross- linking type organopolysitoxane of the presently claimed invention in its structure. Furthermore, the polyglycerol-modified cross-linking type organopolysiloxane polymer of the presently claimed invention has more excellent usability than polyether- modified cross-linking type organopolysiloxane of this reference, which is clear from the results of Table 2, page 49 of present specification. The Office Action on page 10, alleges that the results of Table 2 are subjective and lack a reasonable level of scientific objectivity. However, as disclosed the tests were carried out by a panel of fifty women (see line 11, page 48 to line 2, page 49). Therefore, this test results have sufficient objectivity and there is no basis for the allegation.

The examiner respectfully disagrees with applicants' assertions because the incorporation of the glycerol moiety is clearly taught by the primary reference Shioya et al. On the other hand, Sakuta is incorporated in the reference to clearly show that cross-linking organopolysiloxanes is a commonly known procedure conventionally performed by one of ordinary skill in the art and it has advantages such as excellent water and oil repellence wherein the polymer swells relative to the oils and thereby achieve a more stable, functional cosmetic composition. Sakuta does not have to teach the incorporation of the glycerol moiety because that limitation is clearly taught by Shioya et al. Furthermore, the polymer structure taught by Shioya et al. reveals that the free hydroxyl groups available on the glycerol moiety can undergo further cross-linking reactions. With regard to the unexpected results applicants allege, applicants assertions hinge on the arguments filed on 08/14/09 that compositions in examples 11 and 12 which contain polyglycerol-modified silicone have shown very good moistness after use and long term moistness than cross-linked polyether-modified silicone containing composition. The

Art Unit: 1619

examiner maintains his rebuttal arguments set forth in the previous office action mailed on 09/23/09 and incorporates them in the instant office action as set forth below.

Although the examiner acknowledges that applicant's qualitative data indicates that the composition of examples 11-12 were relatively having very good moistness after use and long term moistness in general, the examiner respectfully disagrees with applicant's

assertion that this is due to the incorporation of cross-linked polyglycerol derivative.

On the contrary applicant really also proved that a composition containing **polyglycerol-**

modified silicone just exactly the same as Shioya et al. also exhibited very good

moistness after use and long term moistness in general (example 12). Example 12

shows the incorporation of uncross-linked polyglycerol-modified silicone which is

exactly the same as the polymer taught by Shioya et al., which is a species of

polyglycerol-modified silicone. Applicants as distinctly differentiate between cross-

linked polyether-modified silicone and polyether-modified silicone, applicant clearly

states that in example 12 the polymer is polyglycerol-modified silicone it does not state

cross-linked polyglycerol-modified silicone. Furthermore, the results provided in the

specification have been reviewed and are not considered to be unexpected results because

the data submitted comparing the assessment of Examples 11-12 and comparative

examples 1-2 contains a comparison of the moistness and long-term moistness. Simply

stating that Examples 11-12 result in a very good moistness and long-term-moistness

does not provide sufficient weight to overcome the instant rejection. The assessment is

subjective and lacks a reasonable level of scientific objectivity. Applicants did not

address the examiner's assertions set forth above in order to demonstrate the

unexpectedness of the results.

Applicants also argue that Regarding Harai, EP 0 350 951, polyglyceroldiallylether and diglyceroldiallylether are cited as constituents of a silicone rubber adhesive agent. However, acryl-functional or methacryl-functional silane coupling agent of component (D) and epoxy-functional silane coupling agent of component (E), which are not used for the organopolysiloxane polymer of the present invention as a component, are essential. Therefore, the present invention is different from the invention of Harai in the technical concept of the invention. As such, one of ordinary skill in the art would not have selected these two specific components from among others and apply them to a different invention altogether. The examiner respectfully disagrees with applicants' assertions because applicants' claim recitation does not exclude the inclusion of other agents from the composition. The claim recitation uses the transitional phrase containing, the transitional term "containing", which is synonymous with "including," "comprising," or "characterized by," is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. See, e.g., *Mars Inc. v. H.J. Heinz Co.*, 377 F.3d 1369, 1376, 71 USPQ2d 1837, 1843 (Fed. Cir. 2004) ("like the term comprising, the terms containing and mixture are open-ended."). *Invitrogen Corp. v. Biocrest Mfg., L.P.*, 327 F.3d 1364, 1368, 66 USPQ2d 1631, 1634 (Fed. Cir. 2003).

Applicants further argue that in Harai, partial allyl ether of polyalcohol is added to give tackiness to the uncured adhesive agent (lines 6-9, page 4, '951). However, the organopolysiloxane polymer of the presently claimed invention has the effect of having non-tackiness when it is applied to the cosmetic material (see, e.g., lines 20-22, page 75, of the specification), which is an opposing effect to the case of Harai. This is also proved by the description in the examples of lines 12 and 13, page 44, line 29, page 45 to line 1,

Art Unit: 1619

page 46 etc. the examiner respectfully disagrees with applicants' assertions because the motivation to combine the references does not necessarily have to match with what applicants want to accomplish. The reason or motivation to modify the reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem. **It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by applicant.** See, e.g., *In re Kahn*, 441 F.3d 977, 987, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) **(motivation question arises in the context of the general problem confronting the inventor rather than the specific problem solved by the invention)**; *Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1323, 76 USPQ2d 1662, 1685 (Fed. Cir. 2005) (“One of ordinary skill in the art need not see the identical problem addressed in a prior art reference to be motivated to apply its teachings.”); *In re Linter*, 458 F.2d 1013, 173 USPQ 560 (CCPA 1972) (discussed below); *In re Dillon*, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1990), cert. denied, 500 U.S. 904 (1991) (discussed below). In light of the forgoing discussion, one of ordinary skill in the art would have concluded that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a). Therefore, the invention would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary. Applicants have not demonstrated how the claimed product is patentably distinct from the cited prior arts nor do the claims as currently written distinguish the instant invention over the prior arts. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in

Art Unit: 1619

the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Conclusion

Claims 2 and 37-38 are rejected. Claims 1, 3-6, and 35-36 are cancelled. Claims 7-34 are withdrawn. No claims are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIGABU KASSA whose telephone number is (571)270-5867. The examiner can normally be reached on 9 am-5 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne P. Eyler can be reached on 571-272-0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit: 1619

Tigabu Kassa

04/21/10

/YVONNE L. EYLER/

Supervisory Patent Examiner, Art Unit 1619